

ACRIFLAVINE.*

A NEW GONOCOCCICIDE.

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At the suggestion of Ehrlich, Benda, in 1912, in search of a remedy for combating Trypanosome infections, evolved a coal-tar dye which he called "Flavine."

Later investigators, seeking a substance which should, according to Geraghty, quoted by Davis and Harrell, combine "rapid diffusibility and penetration of tissues," out of a series of more than 200 preparations, chiefly triphenylmethanes and synthetic substances related to the sulphonephthaleins, settled upon a salt which they named Diamino-Methyl-Acridinum Chloride, known by the trade name of "Acriflavine."

Of this series, although highly germicidal in watery solution, almost all lost their power in urine. Out of the number, four were found to be "antiseptic and diffusible," Acriflavine being the most so.

Harrell found that an Acriflavine solution injected into the urethra of a dog, the animal being immediately killed, and its urethra and bladder being immediately removed, had penetrated to the muscular layer.

In seeking a urinary antiseptic primarily, Davis and Harrell selected Acriflavine for experimental work, clinically. Harrell was led in the direction of its effects as a gonococcicide. He found, (1) that a dilution of 1-300,000, in a protein-containing medium, inhibited the growth of gonococci, being 600 times stronger in this respect than Protargol.

(2) Its solution will penetrate the mucosa and submucosa of the urethra and bladder.

(3) It is non-toxic and only slightly irritating to the mucous membrane.

(4) The average duration of a gonorrhea with its use, is distinctly shorter than with the usual methods.

(5) In an occasional case it appears to be without effect upon the course of the disease.

Conclusions. Harrell has frequently had the organisms disappear from the discharge following a single injection, not to return during its subsequent course. In a majority of cases they have disappeared after three injections.

In his first series, consisting of fifteen cases, the average duration of treatment was a fraction over five days. The average number of treatments was a fraction over seven.

In cases of involvement of both anterior and posterior urethra, the posterior improves before the anterior; the first urine will appear cloudy, the second and third clear after treatment.

Cases with undue frequency and nycturia will often be relieved of these symptoms after one, and nearly always after the second or third injection.

In Harrell's fifteen cases the duration of the infection varied between two weeks and two years.

When, after treatment had been begun, recurrences took place, treatment was not resumed until the lapse of from five to seven days, then usually being followed by prompt results. In an occasional case the treatment was without effect.

All of the above findings are deduced from cases which were able to be followed for several weeks after treatment was discontinued.

Since acquiring a supply of Acriflavine, it has been my fortune to have had a very limited number of cases upon which to use it and observe its effects. Probably the most striking result from its use, as it impressed me, was its remarkably prompt germicidal effect. The organism disappeared after the first, or at most the third injection. One patient did not tolerate it well, even in a dilution less than that recommended, viz., 1-1000, necessitating falling back upon the silver-proteid preparations. Another patient, a hard-working mechanic, not overly intelligent in his care of himself, improved so promptly, that he withdrew from observation. Later, I learned that there had been a recurrence, which had been complicated by an acute epididymitis.

The very few remaining cases do not warrant me in drawing any broad conclusions. Back of my own very limited experience in the use of this gonococcicide lies that of Davis and Harrell, with their surprising results, coupled with their verification, in my own hands, have stimulated me to seize with avidity a remedy for the treatment of gonorrhea, which is almost revolutionary as regards time, and seemingly a striking swing-back of the pendulum toward purely local treatment in the therapy of this distressing and usually obstinate disease.

References.

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Whether a hospital is a Class A institution or a Class D institution will be information that patients may learn for themselves before choosing a hospital in the near future, if the occasion requires.

The shortcomings of hospitals have been scrutinized by superintendents and trustees of institutions all over the country with the result that a demand has arisen for standardization. A. R. Warner, M. D., superintendent of the Lakeside Hospital, Cleveland, Ohio, declares that the defects of hospital management and administration are now fairly well known to those directly interested. He writes on hospital standards in *The Modern Hospital*.

The organization of some hospitals has been more highly developed than others. The service of some surpasses that of other institutions, while in many hospitals the facilities for diagnosis and treatment excel.

Standardization becomes a necessity, Dr. Warner asserts, because the public will not tolerate the deficiencies if they can be recognized. The fact that superintendents and hospital directors are aware of defects imposes upon them the duty of promoting higher standards in all that pertains to the care and treatment of the sick. Dr. Warner voices a warning that the hospitals themselves must accomplish this standardization before the public at large learns of some of the existing defects of various institutions.

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